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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,764	11/09/1999	LOUIS C. YUN	015685-032/5	8412

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 04/11/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/437,764

Applicant(s)

YUN ET AL.

Examiner

Steven HD Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/26/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 27.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 3/26/2003 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-7, 10-13, 15-16, 19-27, 29-30, 33-36, 38-39 and 42-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Schorman (USP 5960350).

Regarding claims 1 and 10, Schorman discloses (Fig 1-3 and col. 1, lines 5 to col. 7, lines 40) a CDMA system which includes at least one mobile and at least one base station wherein the base station comprises the step of transmitting a plurality of CDMA pilot downlink signals from base station to subscriber unit wherein each pilot downlink signal processed with a different weight set “phase and gain” than the other pilot downlinks signals (Fig 2, Ref 72 for generating a

Art Unit: 2665

beacon “pilot” signal and Ref 74 used to control phase and gain of pilot signals or data signal wherein each beacon has a different phase and gain); receiving a report signal for at least one of the pilot downlink signals (Fig 2, Ref 78 for receiving a beacon “pilot” quality report from a mobile) and selecting a weight set from the plurality of weight sets based on the received report signal (Fig 2, Ref 82 is used to select a weight set from the received reports signal).

Regarding claims 2-4 and 11-13, Schorman discloses a first identifier included in the first pilot signal of the first base station and a second identifier included in the second pilot signal of second base station wherein the distance between the base stations is sufficient enough to assure the communication between the second base station and subscriber unit will not interference the first pilot signal transmitted by the first base station (Col. 5, lines 42-58, each pilot signal has an unique PN code for a base station, each base station is identified with a unique code in order to prevent the interference between the communication between the second base and mobiles and the transmitted pilot signal of the first base station).

Regarding claims 6-7 and 15-16, Schorman discloses the subscriber identifying the pilot signal that a signal strength excess a threshold value and report it to the serving base station (col. 7, lines 5-18) and inherently discloses the pilot signals includes in one of candidate, Neighbor or remaining set in CDMA standard.

Regarding claims 19, 24, 33 and 42, Schorman discloses (Fig 1-3 and col. 1, lines 5 to col. 7, lines 40) a system comprising a receiving circuit for coupling to an array antenna, to receive a report signal which corresponds to a downlink pilot signal which is used to control power “gain” of the signal (Fig 2, Ref 24 is array antenna, ref 78 is used to receive a report signal which associated with a downlink beacon); transmit weight processor for coupling to the

Art Unit: 2665

receiving circuit for determining a weight set must be applied to a downlink signal based on the report signal (Fig 2, Ref 82 and 76 and 70).

Regarding claims 20-23 and 43-46, Schorman discloses a transmit circuit, coupled with the transmit weight processor, to apply the determined weight set to beamform a downlink signal which is a data and pilot signal and a pilot signal generator for generating a plurality of pilot signals (Fig 2, Ref 62, Ref 70 is data signal and ref 72 is for generating pilot signals).

Regarding claims 25-27 and 34-36, these claims are similar to claims 2-4. Therefore, these claims are rejected under similar rationale.

Regarding claims 29-30 and 38-39, these claims are similar to claims 6-7. Therefore, these claims are rejected under similar rationale.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 8-9, 14, 17-18, 28, 31-32, 37 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schorman (USP 5960350).

Regarding claims 5, 8-9, 14, 17-18, 28, 31-32, 37 and 40-41, Schorman discloses the subscriber unit receiving a plurality of pilot signal from a plurality of base stations, measuring the signal strength of a plurality of pilot signal in order to report the measured signals to the serving base station (Col. 5, lines 42-58). Schorman does not disclose a serving base station

Art Unit: 2665

using the report signal for initiating a handoff request and transmitting an estimate of the weight set to be used after handoff. However, examiner takes official notice that a method and apparatus for handoff or handover in CDMA system based on a report signal from a mobile and the serving base station forwards a parameters about the mobile to target base station are well known and expected in the art. Since, Schorman suggests that the mobile measures the signal strength of pilot signals and reports back to the base station. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply a method and apparatus for initiating a handoff between the base stations base on a received report measurement pilot signal strength into Schorman's method and apparatus. The motivation would have been prevent a drop call.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida (USP 5886987) discloses a method and apparatus for CDMA transmission/reception.

Handy (USP 5982758) discloses a method and apparatus for merging neighbor list in CDMA system.

Harrison (USP 6067324) discloses a method and system transmitting and demodulating a communication signal using adaptive antenna array is a wireless system.

Art Unit: 2665

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Steven HD Nguyen
Primary Examiner
Art Unit 2665
April 6, 2003